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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,153	03/25/2004	Manabu Koike	4041P-000055	7401

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EXAMINER	
SHECHTMAN, SEAN P	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/809,153	KOIKE ET AL.	
	Examiner	Art Unit	
	Sean P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 18-46 are presented for examination. Claims 1-17 have been cancelled. Claims 18-29 have been amended. Claims 30-46 are new.

Specification

2. Objection withdrawn due to the amendment.

Claim Objections

3. Claim 38 is objected to because of the following informalities: Referring to line 5, "lest" should be rephrased "least". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-25, 29, 32, 34, 39-42, 44-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 19 recites the limitation "said workpieces contained in said plurality of manufacturing lots" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 20 recites the limitation "the at least one workpiece contained in a respective manufacturing lots" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

6. Referring to claim 20, the phrase "a respective manufacturing lots" is unclear.

7. Claim 21 recites the limitation "the at least one workpiece of a specified number of manufacturing lots" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 22 recites the limitation "the at least one workpiece of a specified manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 23 recites the limitation "the at least one workpiece of at least one specified manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 23 requires the limitation of "the workpieces", however, claim 23 requires the limitation of "required workpieces" and claim 18 requires the limitation of "workpieces". Therefore, it is not clear which workpieces are "the workpieces". Claims 37 and 40 present a similar situation with the term "the workpieces".

11. Claim 24 recites the limitation "the at least one workpiece in a specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 24 recites the limitation "the in-process work step" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 25 recites the limitation "the at least one workpiece contained in respective lots" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 29 recites the limitation "said first specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

15. The term "new" in claim 32 is a relative term which renders the claim indefinite. The term "new" is not defined by the claim, the specification does not provide a standard for

ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The requirements of the lot has been rendered indefinite by the use of the term new.

16. Claim 34 recites the limitation "the manufacturing lot" in line 4. There is insufficient antecedent basis for this limitation in the claim.

17. Referring to claim 34, it is not clear what element is intended to be referenced by the term "its".

18. Claim 39 recites the limitation "the at least one workpiece of a specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

19. Claim 40 recites the limitation "the at least one workpiece of at least one specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

20. Claim 41 recites the limitation "the at least one workpiece in a specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

21. Claim 41 recites the limitation "the operator" in line 3. There is insufficient antecedent basis for this limitation in the claim.

22. Claim 42 recites the limitation "the same carrier" in line 2. There is insufficient antecedent basis for this limitation in the claim.

23. Claim 44 recites the limitation "the at least one workpiece contained in a specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

24. Claim 45 recites the limitation "the at least one workpiece contained in a specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

25. Claim 46 recites the limitation "the at least one workpiece contained in a specific manufacturing lot" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Due to the number of 35 USC § 112 rejections, the examiner has provided a number of examples of the claim deficiencies in the above rejections, however, the list of rejections may not be all inclusive. Applicant should refer to these rejections as examples of deficiencies and should make all the necessary corrections to eliminate the 35 USC § 112 problems and place the claims in proper format.

Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

26. Claims 30, 31, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art (AAPA).

Referring to claim 30, AAPA teaches designating each manufacturing lot of a plurality of manufacturing lots containing a workpiece as a main objective to be managed (See Fig. 4 and corresponding description, paragraph 55); and loading an specified number of manufacturing lot

(See the Fig. 4) on a carrier (See Fig. 18) so as to cause said workpieces contained in respective manufacturing lots to pass along a plurality of manufacturing process flows (See description of the lot batch processing apparatus in page 13, line 28 – page 14, line 2).

Referring to claim 31, AAPA teaches the manufacturing managing method in accordance with claim 30, wherein the workpieces contained in the plurality of lots and once loaded on said carrier are managed as a lot group (See Fig. 4).

Referring to claim 34, AAPA teaches Fig. 4 with an old system and not a new system, therefore, there is no coexistence.

27. Claims 18-24, 30, 31, 33, 35-41 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,980,591 to Akimoto.

Referring to claims 18, 30, 31, 35, Akimoto teaches designating each manufacturing lot of a plurality of manufacturing lots containing a workpiece as a main objective to be managed (figs. 24-29; Col. 31, line 45 – Col. 36, line 4); loading an specified number of same type manufacturing lots (See fig. 24, C2; Col. 32, lines 10-11) and an specified number of different type manufacturing lots on a carrier (See fig. 24, C3; Col. 32, lines 17-20), said same type manufacturing lots containing workpieces having the same work conditions in a work step (See fig. 24) and said different type manufacturing lots containing workpieces having different work conditions (See fig. 24); and transporting said carrier to a batch apparatus that performs simultaneous processing ***or*** machining operation applied to said workpieces ***or*** to an apparatus that brings said workpieces into an in-process work step under the same or different conditions (Fig. 22-23; Col. 32, line 21 – Col. 33, line 46), so as to cause said workpieces contained in

respective similar or different type manufacturing lots to pass along a plurality of manufacturing process flows (Col. 31, lines 45-50; Col. 35, lines 42-63; Col. 24, lines 52-64; Fig. 29).

Referring to claim 31, Akimoto teaches the manufacturing managing method in accordance with claim 30, wherein the workpieces contained in the plurality of lots and once loaded on said carrier are managed as a lot group (Fig. 24, C2).

Referring to claim 33, Akimoto teaches the manufacturing managing method in accordance with claim 30, wherein a loading of workpieces contained in other lots is prohibited when a specific lot to be processed urgently is loaded on said carrier (Fig. 14; Col. 38, lines 13-17).

Referring to claims 36 and 19, Akimoto teaches the manufacturing managing method in accordance with claim 35, further comprising a step of making a judgment before starting the in-process work step in said apparatus as to whether or not said workpieces contained in said plurality of lots should be loaded on said carrier (Col. 32, lines 29-40).

Referring to claims 37 and 20, Akimoto teaches the manufacturing managing method in accordance with claim 36, further comprising a step of further loading additional workpieces of at least one lot on the carrier under a condition that the workpieces contained in said plurality of lots are already loaded on the carrier before said carrier is transported to an apparatus that has the capability of processing an increased number of workpieces (Col. 32, lines 29-40).

Referring to claims 38 and 21, Akimoto teaches the manufacturing managing method in accordance with claim 35, further comprising a step of making a judgment after finishing the in-process work step in said apparatus as to whether or not the workpieces of a predetermined

number of lots should be unloaded from said carrier under a condition that the workpieces contained in said plurality of lots are loaded on said carrier (Col. 32, lines 29-40).

Referring to claims 39 and 22, Akimoto teaches the manufacturing managing method in accordance with claim 38, further comprising a step of unloading the workpieces of a specific lot beforehand when said specific lot cannot be processed together with other lots in a subsequent manufacturing process flow (Col. 32, lines 41-55).

Referring to claims 40 and 23, Akimoto teaches the manufacturing managing method in accordance with claim 35, further comprising a step of unloading the workpieces of at least one specific lot under a condition that the workpieces contained in the plurality of lots are already loaded on said carrier and a step of loading required workpieces of another lots on said carrier, thereby repacking the workpieces on the carrier before starting the in-process work step in said apparatus (Col. 31, lines 27-41).

Referring to claims 41 and 24, Akimoto teaches the manufacturing managing method in accordance with claim 35, further comprising a step of unloading part of workpieces in the same lot before starting the in-process work step in said apparatus in such a manner that an original lot number of each unloaded workpiece can be identified later from a condition that the workpieces contained in the plurality of lots are loaded on said carrier, and a step of loading another workpieces of at least one new lot on said carrier (Fig. 25).

28. Claims 18, 19, 21, 24, 26-29, 30-32, 36, 38, 41, 42, 44-46, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 6,449,522 to Conboy.

Referring to claims 18, 30, 35, Conboy teaches designating each manufacturing lot containing a workpiece as a main objective to be managed (Abstract); loading (Col. 3, lines 6-9; Col. 3, lines 35-40; Col. 4, lines 55-64) an specified number of same type manufacturing lots and an specified number of different type manufacturing lots on a carrier (Col. 4, lines 1-7; Col. 7, lines 45-47), said same type manufacturing lots containing workpieces having the same work conditions in a work step and said different type manufacturing lots containing workpieces having different work conditions (Col. 4, lines 1-7); and transporting said carrier to a batch apparatus that performs simultaneous processing ***or*** machining operation applied to said workpieces ***or*** to an apparatus that brings said workpieces into an in-process work step under the same or different conditions (Col. 8, lines 6-15), so as to cause said workpieces contained in respective similar or different type manufacturing lots to pass along a plurality of manufacturing process flows (Col. 3, lines 13-25).

Referring to claim 31, Conboy teaches the manufacturing managing method in accordance with claim 30, wherein the workpieces contained in the plurality of lots and once loaded on said carrier are managed as a lot group (Col. 9, lines 48-54).

Referring to claim 32, Conboy teaches the manufacturing managing method in accordance with claim 30, wherein a loading of workpieces onto said carrier by using a new lot is prohibited (Col. 7, lines 47-65).

Referring to claims 36 and 19, Conboy teaches the manufacturing managing method in accordance with claim 35, further comprising a step of making a judgment before starting the in-process work step in said apparatus as to whether or not said workpieces contained in said plurality of lots should be loaded on said carrier (Col. 5, lines 10-20).

Referring to claim 38 and 21, Conboy teaches the manufacturing managing method in accordance with claim 35, further comprising a step of making a judgment after finishing the in-process work step in said apparatus as to whether or not the workpieces of a predetermined number of lots should be unloaded from said carrier under a condition that the workpieces contained in said plurality of lots are loaded on said carrier (Col. 8, lines 7-15).

Referring to claim 41 and 24, Conboy teaches the manufacturing managing method in accordance with claim 35, further comprising a step of unloading part of workpieces in the same lot before starting the in-process work step in said apparatus in such a manner that an original lot number of each unloaded workpiece can be identified later from a condition that the workpieces contained in the plurality of lots are loaded on said carrier, and a step of loading another workpieces of at least one new lot on said carrier (Col. 3, lines 1-12).

Referring to claims 26, 27, 28, 44-46, Conboy teaches the manufacturing managing method in accordance with claim 35, wherein said apparatus restricts the loading of workpieces contained in a plurality of lots onto said carrier based on a carrier type and on at least either one of a product name and a fundamental process flow (Col. 7, lines 45-65).

Referring to claims 42 and 29, Conboy teaches the manufacturing managing method in accordance with claim 41, wherein a specific lot is continuously loaded on the same carrier when unloading of said specific lot is prohibited beforehand (Col. 7, lines 35-51).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

29. Claims 43 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,980,591 to Akimoto or U.S. Pat. No. 6,449,522 to Conboy as applied to claim 35 above, and further in view of U.S. Pat. No. 5,856,923 to Jones.

Referring to claims 43 and 25, Akimoto and Conboy teach all the limitations set forth above, however, fails to teach temporarily stopping or decelerating said carrier at a mix-loading waiting point provided adjacent to said apparatus and a step of make a judgment as to whether or not the workpiece contained in the plurality of lots are loadable on said carrier.

However, referring to claims 43 and 25, Jones teaches analogous art, including temporarily stopping or decelerating a carrier at a mix-loading waiting point provided adjacent to a workpiece processing apparatus and a step of make a judgment as to whether or not the workpiece contained in the plurality of lots are loadable on said carrier (Col. 4, lines 35-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of Akimoto or Conboy with the teachings of Jones. One of ordinary skill in the art would have been motivated to combine these references because Jones teaches tracking IC devices in a continuous flow from multiple lots through plural manufacturing steps so that manufacturing resources are used more efficiently (Col. 3, lines 46-56).

Response to Arguments

Applicant's arguments filed May 4th 2005 have been fully considered but they are not persuasive.

30. Applicant argues that page 13, line 28 to page 14, line 2, is a description of figure 5 not figure 4. The examiner agrees that, clearly the specification is giving comparison between the

present invention and AAPA with reference to figures 4 and 5, however, this difference clearly has nothing to do with the "lot processing batch processing apparatus" which is clearly the same apparatus in both figures 4 and 5. The examiner was referring to page 13, line 28 to page 14, line 2 as the only enabling definition of the "lot processing batch processing apparatus" which is taught as that which performs simultaneous processing or machining operation applied to the wafers (or to an apparatus that brings the wafers into an in-process work step under the same conditions), so as to cause the wafers contained in lots to pass along a plurality of manufacturing process flows.

31. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a method capable of increasing the in-process efficiency in manufacturing, processing, or machining (or, measuring or inspecting) apparatus) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPS

Sean P. Shechtman

May 25, 2005

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